Quantitative Usage Analysis for Methidathion

Case Number: 0034 PC Code: 100301
Date: 10/27/99 Analyst: Tim Kiely

Based on available pesticide survey usage information for the years of 1987 through 1997, an annual estimate of methidathion's total domestic usage averaged approximately 241,000 pounds active ingredient (a.i.) for 138,000 acres treated. Most of the acreage is treated with 2.8 pounds a.i. or less per application and 2.8 pounds a.i. or less per year. Methidathion is an insecticide with its largest markets in terms of total pounds active ingredient allocated to almonds (18%), oranges (17%), plums and prunes (15%), and walnuts (13%). Crops with a high percentage of their total U.S. planted acres treated with methidathion include artichokes (50%), plums and prunes (11%) and walnuts (9%).

This quantitative usage analysis (QUA) updates estimates provided in an earlier BEAD usage profile (Grube, 2/96). The estimates provided in this QUA indicate a decline from the previous QUA in total acres treated and total pounds applied. Please see attached table for estimates.

METHIDATHION Case #: 0034 AI #: 100301 Analyst: Tim Kiely Data years: 1987-1997 QUA date: 12/29/98
Filename: Methida9.wpd Last edited: 10/27/99

EPA's QUANTITATIVE USAGE ANALYSIS

Site	Acres Grown (000)	Acres Treated (000)		% of Crop Treated		LB AI Applied (000)		Average Application Rate			States of Most Usage
		Wtd Avg	Est Max	Wtd Avg	Est Max	Wtd Avg	Est Max	lb ai/ acre/yr	#appl / yr	lb ai/ A/appl	(% of total lb ai used on this site)
Grapefruit	194	1	3	1%	1%	1	3	1.0	1.0	1.0	FL CA 89%
Lemons	63	1	1	1%	2%	1	1	1.0	1.4	0.7	CA 86%
Oranges	867	16	27	2%	3%	42	73	2.6	1.0	2.6	CA 92%
Oranges, fresh	173	9	16	5%	9%	24	43	2.6	1.0	2.6	
Oranges, processed	694	7	11	1%	2%	18	30	2.6	1.0	2.6	
Apples	572	7	16	1%	3%	8	18	1.1	1.1	0.9	PA CA ME WA ID VA 83%
Pears	78	1	4	1%	5%	2	7	2.0	1.0	2.0	OR CA WA 90%
Kiwifruit	7	0	1	7%	8%	0	2	1.0	1.2	0.9	CA 100%
Carambola	-	-	-	-	-	-	-	-	-	-	
Olives	37	1	2	2%	5%	2	7	2.8	1.0	2.8	CA 100%
Apricots	20	1	2	5%	8%	2	3	2.2	1.5	1.4	CA 100%
Cherries	128	1	4	1%	3%	2	4	1.4	1.1	1.3	CA UT CO OR 84%
Cherries, Sweet	47	0	0	0%	1%	0	0	1.0	1.0	1.0	WA 100%
Nectarines	38	2	4	5%	11%	4	11	2.0	1.0	2.0	CA 100%

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Peaches	212	12	22	6%	11%	25	39	2.1	1.0	2.0	CA 87%
Plums & Prunes	140	16	30	11%	21%	35	49	2.2	1.0	2.1	CA 96%
Mangos	-	-	-	-	-	-	-	-	-	-	
Longan	-	-	-	-	-	-	-	-	-	-	
Almonds	429	27	38	6%	9%	44	95	1.6	1.3	1.3	CA 100%
Walnuts	205	18	23	9%	11%	31	44	1.7	1.4	1.3	CA 100%
Pecans	488	1	2	0%	0%	2	3	1.8	1.0	1.7	GA 88%
Artichokes	16	8	10	50%	63%	16	22	2.0	2.5	0.8	CA 100%
Hay, Other	33,427	3	6	0%	0%	4	12	1.4	1.6	0.8	CA WA 94%
Alfalfa	23,949	1	8	0%	0%	1	7	1.0	1.0	1.0	WA CA 94%
Safflower	113	1	10	0.01	0.09	1	10	1.0	1.0	1.0	CA 100%
Sunflower	2,745	1	4	0%	0%	0	2	0.4	1.0	0.4	OH CA 100%

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Cotton	12,429	17	44	0%	0%	16	38	1.0	1.5	0.6	AZ 85%
Ornamental Plants and Shrubs	-	-	-	-	-	-	-	-	-	-	
Estimated Total /1		138	199			241	346				

COLUMN HEADINGS

Wtd Avg = Weighted average--the most recent years and more reliable data are weighted more heavily.
Est Max = Estimated maximum, which is estimated from available data.
Average application rates are calculated from the weighted averages.

NOTES ON TABLE DATA

Usage data primarily covers 1987 - 1997.
Calculations of the above numbers may not appear to agree because they are displayed as rounded:
to the nearest 1000 for acres treated or lb. a.i. (therefore 0 = < 500) and
to the nearest whole percentage point for % of crop treated (therefore 0% = < 0.5%).
0* = Available EPA sources indicate that no usage is observed in the reported data for this site, which implies that there is little or no usage.
A dash (-) indicates that information on this site is NOT available in EPA sources or is insufficient.

/1 It is unlikely that the likely maximum amount of usage would occur on all sites in any one year. Therefore the numbers reported at the bottom of the estimated maximum columns are obtained half way between the total of the most likely amounts and the total of the likely maximum amounts. This is considered to be a reasonable upper bound for total acres treated and total pounds applied across all sites any one year.

SOURCES:

EPA data (Doane Marketing Research, Maritz Marketing Research, Mike Buckley and Associates).
California Department of Pesticide Regulation.
USDA, National Agricultural Statistics Service, Agricultural Chemical Usage: Fruits Summary (1991, 1993, 1995, 1997), and Field Crop Summary (1990-1997).